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AUTHOR Wilson, Russell C.
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ABSTRACT

The Adjective Check List (ACL) was administered to 142 enrolling GED students to investigate the relationship between students' self-descriptions on the instrument and their persuant persistence behavior in the program. It was hypothesized that there would be no significant ACL scale score differences between those students who discontinued their GED program prior to completion and those who completed or persisted at least 10 weeks. A principal component design was used to reduce data confounding. The first principal component accounted for 43% of the total variance. A significant difference was found between dropouts and persisters on the first component's indexes; the null hypothesis was rejected. A profile of the dropout prone was established. They tended to describe themselves as more rebellious, hostile, assertive, impulsive, headstrong, irresponsible, less socialized, less able to give prolonged effort, and less willing to subordinate themselves to others. While being inattentive to the needs of others, they may desire more supportive and dependent relationships than persisters. Persisters were seen as more obliging, tactful, diligent, practical, and compliant than the dropout. They were more interested in stability and reduced risk-taking. In relationships they were more concerned about the needs of others, more supportive, more persevering, and more able to yield to the reasonable requests of others. It was concluded that recognition of the student's self-described personological profile could be an important consideration in the attempt to improve retention. (Author/TA)

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PERSONOLOGICAL DIFFERENCES BETWEEN ENROLLING GED STUDENTS
WHO DROP OUT AND WHO RETAIN

BY

Russell C. Wilson

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
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INTRODUCTION

Adult educators have long been concerned with the problem of high attrition in adult classes. As early as 1816, Pole encouraged the instructors of adult classes to visit the homes of absent students "...to prevent the learners from relaxing their attendance (21)." In a recent survey (17) forty percent of the adult education teachers surveyed reported a student attrition rate of ten to twenty-four percent during the first five weeks of their classes. Another seventeen percent reported the dropout rate was in the twenty-five to forty-nine percent range. John Niemi (20) has called attrition one of the severest problems confronting adult education. The losses due to non-persistence are considerable. Resource allocation is often related to attendance patterns. Group morale is lowered as teachers and students confront withdrawals. Of utmost importance, ABE/GED may represent the student's "last gamble on education (17)." To withdraw from ABE/GED classes with a sense of failure may close doors of opportunity and open doors of frustration. Both student and society stand to lose.

STATEMENT OF THE PROBLEM

Adult educators have continually called for more research on the attrition problem in adult education. In the 1960's Knox and Sjogren (13) and Moss (19) specifically called for a study of the psychological antecedents of non-

persistence. Yet, research predicting non-persistence in adult education is scarce and inconclusive (3, 6).

Early identification of those who pose a high dropout risk would assist in the solution of the attrition problem. Such identification could help the adult educator in accomplishing what Boshier (3) has called a better match of the personological needs of particular students to those educational environments and experiences most likely to foster persistence and retention.

The use of personality instruments for differentiating educational persisters from non-persisters has met with some success. However, most research has not been directed specifically to an ABE/GED sample. The purpose of this study was to investigate the relationship between the persistence behavior of GED students and the self-descriptions they gave on a personological research instrument at the time of their enrollment.

BACKGROUND

While little has been done with GED samples, researchers have used personological assessment instruments to study adult attrition. Zahn and Phillips (25); Zahn (24); and Knox and Sjogren (14) all found that the response patterns of the Taylor Manifest Anxiety Scale were not significantly different between adult students who did or did not persist in their programs.

Killian (12) used the California Test Of Personality with a sample of adults enrolled in a learning laboratory. He found dropouts scored significantly lower than persisters on the "social adjustment" and "total adjustment" scales. Investigating canadian adult vocational students, Sainty (22) found no significant response pattern differences between persisters and dropouts on a Q-Tags test of personality.

Several studies have reported success in differentiating dropouts from persisters through the interpretation of adjectives which the subjects chose from a list as self-descriptive and/or descriptive of an hypothetical "other." As early as 1959, Heilbrun (9) found the Adjective Check List need scales useful to predict first-year dropouts among female college freshmen. Subjects who dropped responded significantly higher on variables Heterosexuality and Change while lower on Achievement, Order, and Endurance. In a later study using the Adjective Check List, Heilbrun (10) predicted that when intellectual ability was controlled as a variable, college freshmen who dropped out were more assertive and less task oriented than those who persisted. The results supported the hypotheses for both sexes but only at the higher ability level.

Using the Edwards Personal Reference Schedule with adult students Scharles (23) found: 1. Persisting males expressed a significantly higher need for affiliation and a lower need for autonomy than did dropout males. 2. Persisting females showed a higher need for abasement and a lower need for

achievement than females who were dropouts.

Larson and Bible (15) constructed an adjective list and asked adult career education students to indicate on a scale of 1 (least) to 7 (most) how well each adjective described their "self." He found dropouts significantly more often rated themselves lower on "leadership", "ccoperative", and "talkative."

Boshier (2) constructed a list of twenty-three semantically differentiated pairs of adjectives. He then asked adult students to use the differential to project personality descriptions of the hypothetically typical general adult education persistor and dropout. Students who ultimately withdrew from their programs significantly projected fewer differences between the two hypothetical personalities, while students who persisted projected significantly greater differences. Boshier indicated he could predict dropouts from his adult programs from their scale scores prior to the withdraw decision.

DESIGN OF THE STUDY

Hypothesis

The purpose of this study was to investigate the relationship between the persistence behavior of GED students and the self-descriptions they gave on a personological research instrument at enrollment. More specifically, do enrolling GED students who ultimately drop out have a different response pattern on the Adjective Check List (ACL) (7) from

those who persist? A single null hypothesis was stated for testing:

No ACL scale score differences exist between those students who discontinue their GED programs prior to completion and those who complete or persist at least 10 weeks.

Sample

The sample consisted of all students (N=142) enrolling in the spring semester GED programs of a midwestern capital city community college. Of these students, 62 were enrolled on the main campus while 80 were enrolled in satellite programs in outlying communities.

There were 82 females and 60 males in the sample. The students' age range was 16 to 63 years. The age distribution had a mean of 27 and a mode of 18 years.

Instrumentation

Gough's (7) Adjective Check List was used as the test instrument in this investigation. The ACL consists of 300 adjectives commonly used to describe various personological attributes. The individual taking the instrument is asked to read through the adjectives quickly and to select those which are self-descriptive. Through a standard scoring procedure 24 personality attribute scale scores are derived from the response patterns obtained from the subjects' choice of self-descriptors (8). A mean of 50 and a standard deviation of 10 are expected for each of the 24 scale scores.

The ACL was chosen for this investigation because of its simple design, its unobtrusive administrative procedure, and

its wide acceptance as a research instrument for this age and academic level. The instrument would allow the adult high school completion student, in the stress of his return to enroll in an academic pursuit, to give the researcher a description of himself without the threat that can attend more lengthy and complicated instruments. Further, "...the ACL is applicable to a wide variety of problems and has already been extensively employed in research (1. p.533)."

Procedure

Each enrolling GED student was given the ACL as part of his regular enrollment procedure. Standard instructions were used for both the administration and the scoring of the instrument (8).

The sample was divided into two groups: those who dropped out and those who persisted. A student was counted as persisting if he completed 10 weeks of instruction and/or successfully passed the GED tests during that period. A student was considered a "dropout" if he formally withdrew, or if he were not in attendance at least once in any four-week period, and was thus removed from the official class list.

Analysis of the data was complicated by the many variables: The subject's 24 ACL scale scores, his persistence behavior (dropout versus persister), the location of the class he attended (rural versus urban) as well as sex and age. To overcome possible data confounding two statistical procedures were combined to test the hypothesis. The first was principal component analysis (18). The second was

multivariate analysis of covariance (16).

The Biomedical Computer Program's Principal Components routine BMD01M (5) was checked against a known data set and then used for the analysis of the ACL data. The first principal component was that vector which accounted for the maximum variance in the correlation matrix computed from the 24 ACL scale scores of the 142 subjects. Each successive principal component is orthogonal to its immediate predecessor and accounts for an ever-decreasing amount of the total variance in the matrix.

The routine separates and weights the contribution each of the 24 ACL scale scores makes to each of the principal components. The composite of a subject's scale scores multiplied through the component weightings comprise a single unconfounded index score for that subject on that particular component. The index scores are arrayed by the routine in rank order along the component vector. The statistical assumption was that if there were no ACL score differences between subgroups within the sample their entry in the component indices would be randomly distributed. If there were significant score differences their entry in the indices should be polarized.

The multivariate unequal subclass analysis of covariance technique of Kemp (11) was used on those component indices which accounted for at least 15 percent of the ACL variance. The procedure was designed to allow the investigation of the differences between subgroups. The model used for analysis

was $y + \alpha + \text{class location} + \text{sex} + \text{persistence behavior} + \text{class location by sex} + \text{class location by persistence behavior} + \text{sex by persistence behavior} + \text{class location by sex by persistence behavior} + \text{Beta/age} + \text{error}$.

Thus, the component indices which were freed from ACL variable confounding were examined by multivariate analysis of covariance to free the confounding of the variables of persistence behavior, class location, sex and age. A significant indices difference between groups of adult students on a component contributing at least 15 percent of the ACL variance was assumed to signify a multivariate validation of unconfounded ACL scale score differences between the subgroups. A significance level of $p < .05$ was chosen as the minimum acceptable for the rejection of the hypothesis.

Validation of unconfounded indices differences between groups would allow a more direct analysis of the ACL scale score differences and thus provide more clarity in projecting personological differences between subgroups. Upon clearing the data from confounding, a Hotelling's T^2 procedure was used as a general measure of score differences across all of the ACL variables between groups (18). A significance level of $p < .05$ was chosen because the general measure of the ACL scale score differences for a particular subgroup should correspond with the indices difference for that group.

The MANOVA computer program of Colley and Lohnes (4) was chosen to test for scale score differences on each of the ACL variables. This particular package allowed all 24 tests to

be made with a single computer run. A level of $p < .05$ was set as the minimum for concluding a significant difference existed between the two groups.

RESULTS

The ACL was administered to 142 enrolling GED students. The instrument was scored in accordance with the directions of the ACL Manual. At the end of 10 weeks the attrition rate was 20 percent: 29 students dropped out while 113 remained. Coded information on class location, sex, age, and persistence behavior were added to the twenty-four standardized scores and the resultant data analyzed.

Only the first two principal components accounted for as much as 15 percent of the ACL variance. Their proportion of the total variance was 43 percent and 20 percent respectively. Table 1 shows the weight each ACL variable contributed to each of the two components.

When the multivariate analysis of covariance technique was used on the principal component indices the first two components were found to polarize different sources of variance. The first principal component significantly reflected the variance between persisters and dropouts. Although no significant differences were found, the second component primarily reflected the variance between those students attending urban versus non-urban classes.

TABLE 1

ACL VARIABLE CONTRIBUTIONS FOR THOSE TWO COMPONENTS
WHICH ACCOUNT FOR AT LEAST FIFTEEN PERCENT
OF THE ACL VARIANCE

ACL Variable	Variable Contributions	
	Component 1	Component 2
1. Number of Adj. Ckd.	-0.0061	-0.0408
2. Defensiveness	0.2835	-0.0620
3. Favorable Adj. Ckd.	0.2795	-0.1109
4. Unfavorable Adj. Ckd.	-0.2381	-0.0833
5. Self-Confidence	0.1031	-0.3581
6. Self-control	0.2517	0.1641
7. Liability	0.0612	-0.1808
8. Personal Adjustment	0.2719	-0.0211
9. Achievement	0.2326	-0.2092
10. Dominance	0.1537	-0.3414
11. Endurance	0.2704	-0.0220
12. Order	0.2567	-0.0197
13. Intrareception	0.2681	0.0032
14. Nurturance	0.2747	0.0822
15. Affiliation	0.2632	-0.0417
16. Heterosexuality	0.1307	-0.1588
17. Exhibition	-0.0861	-0.3738
18. Autonomy	-0.1689	-0.3125
19. Aggression	-0.2413	-0.2379
20. Change	-0.0012	-0.2777
21. Succorance	-0.1997	0.1137
22. Abasement	-0.0318	0.3418
23. Deference	0.1889	0.2995
24. Counseling Readiness	-0.1091	0.0400

Table 2 shows the results of the multivariate analysis of covariance of the indices of component one. Dropouts were found to have a lower composite indices for the ACL variables than persisters. The indices differences between dropouts and persisters were significant at the $p < .05$ level.

The multivariate analysis of the indices of the second principal component showed no significant subgroup differences. Table 3 summarizes the results.

Because the unconfounded indices of the first principal component showed a significant difference between persisters and dropouts, the multivariate and univariate analyses of the ACL scale scores were undertaken. Table 4 reports the results of those analyses. The Hotelling's T^2 procedure found the ACL scale score differences between the two subgroups to be significant.

The ACL scale univariate comparisons found eight of the 24 variables to be significantly different. Persisters scored significantly higher than dropouts in Self-control, Endurance, Nurturance, and Deference. Dropouts scored significantly higher than persisters in the Number of Unfavorable Adjectives Checked, Autonomy, Change, and Succorance.

TABLE 2

MULTIVARIATE ANALYSIS OF COVARIANCE FOR COMPONENT ONE

Comparison	Adjusted	Standard	P
Dropout	-1.17	0.67	0.05
Persister	0.27	0.30	
Urban Class	-0.61	0.48	0.67
Non-Urban Class	-0.30	0.55	
Female	-0.20	0.41	0.49
Male	-0.70	0.60	
Urban Dropout	-1.32	0.84	0.97
Urban Persister	0.10	0.46	
Non-Urban Dropout	-1.03	1.03	
Non-Urban Persister	0.44	0.40	
Female Dropout	-0.50	0.72	0.24
Female Persister	0.09	0.42	
Male Dropout	-1.85	1.12	
Male Persister	0.45	0.44	
Urban Female	-0.09	0.63	0.45
Urban Male	-1.13	0.72	
Non-Urban Female	-0.32	0.54	
Non-Urban Male	-0.27	0.96	
Urban Female Dropout	-0.28	1.06	0.81
Urban Female Persister	0.10	0.67	
Urban Male Dropout	-2.35	1.29	
Urban Male Persister	0.09	0.63	
Non-Urban Female Dropout	-0.72	0.96	
Non-Urban Female Persister	0.08	0.50	
Non-Urban Male Dropout	-1.35	1.82	
Non-Urban Female Persister	0.81	0.62	

TABLE 3

MULTIVARIATE ANALYSIS OF COVARIANCE FOR COMPONENT TWO

Comparison	Adjusted	Standard	P
Dropout	-0.24	0.46	0.52
Persister	0.09	0.21	
Urban Class	-0.52	0.33	0.07
Non-Urban Class	0.37	0.38	
Female	-0.26	0.28	0.46
Male	0.11	0.41	
Urban Dropout	-0.95	0.58	0.30
Urban Persister	-0.10	0.32	
Non-Urban Dropout	0.47	0.71	
Non-Urban Persister	0.28	0.27	
Female Dropout	-0.21	0.50	0.38
Female Persister	-0.31	0.29	
Male Dropout	-0.28	0.77	
Male Persister	0.49	0.30	
Urban Female	-0.62	0.43	0.74
Urban Male	-0.42	0.49	
Non-Urban Female	0.11	0.37	
Non-Urban Male	0.64	0.66	
Urban Female Dropout	-0.85	0.73	0.92
Urban Female Persister	-0.39	0.46	
Urban Male Dropout	-1.04	0.89	
Urban Male Persister	0.20	0.43	
Non-Urban Female Dropout	0.44	0.66	
Non-Urban Female Persister	-0.23	0.34	
Non-Urban Male Dropout	0.49	1.25	
Non-Urban Female Persister	0.79	0.43	

TABLE 4

UNIVARIATE AND MULTIVARIATE F-RATIOS BETWEEN THE MEAN ACL
SCALE SCORES OF DROPOUTS AND PERSISTERS IN GED PROGRAMS

Variables	Dropouts'	Persisters'	F-Ratio
	Means (N=29)	Means (N=113)	
1. Number of Adj. Ckd.	38.52	38.93	0.03
2. Defensiveness	44.03	47.24	1.94
3. Favorable Adj. Ckd.	42.59	44.92	1.03
4. Unfavorable Adj. Ckd.	55.34	48.98	8.14**
5. Self-Confidence	45.62	46.82	0.50
6. Self-Control	43.03	47.66	5.77*
7. Lability	46.41	44.58	1.07
8. Personal Adjustment	42.69	46.21	3.20
9. Achievement	44.55	47.35	2.45
10. Dominance	48.03	49.31	0.59
11. Endurance	46.07	49.67	3.97*
12. Order	41.41	44.08	2.15
13. Intraception	43.34	46.76	3.47
14. Nurturance	42.76	47.27	5.51*
15. Affiliation	45.41	46.01	0.08
16. Heterosexuality	48.79	47.80	0.25
17. Exhibition	51.21	50.45	0.20
18. Autonomy	52.52	49.30	3.37*
19. Aggression	53.38	50.58	1.94
20. Change	51.76	46.59	9.02**
21. Succorance	52.76	49.27	3.80*
22. Abasement	48.79	48.42	0.05
23. Deference	46.38	50.26	5.17*
24. Counseling Readiness	47.83	49.27	0.60

Hotelling's T^2 = 48.7222

F = 1.6966 (df=24, 117) p<.05

* p<.05 (df=1, 140)

** p<.01 (df=1, 140)

SUMMARY AND CONCLUSIONS

This study investigated the relationship between enrolling GED students' self-descriptions on the Adjective Check List (ACL) and their pursuant persistence behavior in a GED program. It was hypothesized that no ACL scale score differences existed between those students who discontinued their GED programs prior to completion and those who completed or persisted at least 10 weeks.

The instrument was administered to 142 enrolling students. Regular procedures were used for scoring. A principal component design was used to establish a single unfounded index score from each subjects' 24 ACL scale scores. Only two components were found to account for 15 percent of the total ACL variance.

A multivariate analysis of covariance was applied to the component indices to determine if there were significant differences between the variables of class location, sex, persistence behavior, and the variable interactions. Age was used as the covariate.

A significant difference was found between dropouts and persisters on the first component's indices. Thus it was concluded that significant ACL scale scores did exist between the self-descriptions of enrolling GED students who drop out and those who complete their programs or persist for at least 10 weeks. The null hypothesis was rejected.

The Hotelling's T^2 general measure of the ACL variable difference between dropouts and persisters was significant.

The univariate analysis found a significant difference between the two groups on eight of the 24 individual ACL scale scores. Using the ACL Manual's interpretations of the eight significantly different variables, personological portraits may be drawn for dropouts and persisters (8).

Dropouts described themselves as more rebellious and hostile. They were seen as less socialized, while being more impulsive, headstrong, and irresponsible. They are less able to give prolonged effort, being more impatient and comfortable with disorder and change than the persister. The dropout was seen as indifferent to the feelings and needs of others as he is assertive, less willing to subordinate himself and more desirous of attention and authority. He seeks succorance. While being inattentive to the needs of others he may desire more supportive and dependent relationships than persisters.

The persister was seen as more obliging, tactful, diligent, practical, and compliant than the dropout. He was more interested in stability and reduced risk-taking. In relationships he was more concerned about the needs of others, more supportive, more persevering, more able to yield to the reasonable requests of others.

Attrition accounted for by other causes (sickness, change of residence, family problems, etc.) was not removed from the data. This fact would tend to make the statistical differences between the two groups more conservative and the personological differences more important for program

planners and teachers.

As stated, adult educators have expressed much concern over the need to reduce attrition in GED programs. Recognition of the student's self-described psychological profile could be an important consideration in the attempt to improve retention. If the non-persister is to be retained he will need more understanding and support. Their past failures and present anxieties require greater efforts and consideration from the teacher. Learning periods may need to be shortened and the number of success experiences increased in order to retain these persons. Peer relationships may be encouraged and fostered to increase their bonds to the program. Above all, they will need instructors who are mature and willing to absorb some of the jolts and jars encountered when working with persons who may tend to be self-centered and insensitive.

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